Hybrid bodies: bionic bodies, semi-living bodies, modified bodies

Natalia Matewecki
Universidad Nacional de La Plata, Argentina

Abtract

This paper depicts different problems arising from the presence of a hybrid in the posthumanism era. Bioart, a hybrid practice combining art, science and technology is taken as a case study.

Posthumanism and hybrid bodies in bioart

Posthuman, postorganic, postbiological, postsubject and postevolution are concepts which indicate, if not the end, the possibility of the end of an era. This signals the closing of the modern age - characterized by humanistic thought - which divides on one hand, the world into natural laws, and on the other hand, into political representations; it also splits nature from society as well as the technical world of the objects from the language construction of the subjects (Latour 2007). To sum up, it establishes the boundaries between what is considered to be human and that which is not human: things, objects and animals. Within this 'Great Divide' between 'them' and 'us' (Latour 2007), humanism focuses on the extremes (natural elements versus social elements, local issues versus global issues) and not the middle ground. For modern thinkers there’s nothing at all in the middle, just waste and rubbish; whereas for posthumanism thinkers what is found in the middle is very meaningful: hybrids, monsters, mixes.

The 'Great Divide' of the humanism is questioned by Agamben, who considers how and why man and non-man, as well as human beings and animals have been separated (Agamben 2007). Latour studies the hybrids which humanism denies according to modern concepts: it is impossible to consider frozen embryos, digital machines or transgenic crops in either extreme - as object or subject - since all of them are chimeras, hybrid monsters which do not fit:

> (…) where are we to classify the ozone hole story, or global warming or deforestation? Where are we to put these hybrids? Are they human? Human because they are our work. Are they natural? Natural because they are not our doing. Are they local or global? Both. (Latour 2007: 84)

Hybrid, according to Latour, is a concept that includes 'the newest conquests of information theory, molecular biology and physics' (ibid: 146). This idea fully coincides with Derrick de Kerckhove, who considers bit, gene and atom (the first studied by informatics, the second by molecular biology and the third by physics) as the three basic units for any kind of recombination. Paula Sibilia considers this approach to hybrids - the taking into account of disciplines connected to informatics and life sciences - focuses the biological body transformation as the combination of bits and genes, atoms and genes and also a combination of different genes.

The human body now begins to evolve in a different way, becoming, little by little, a cyborg – a hybrid body formed by the mix of cybernetics and biological elements affecting both the external appearance and also the inner aspect of a human being:

> My body is an electronic virgin. I incorporate no silicon chips, no retinal or cochlear implants, no pacemaker. I don't even wear glasses (though I do wear clothes), but I am slowly becoming more and more a cyborg. So are you. Pretty soon (…). For we shall be cyborgs not in the merely superficial sense of combining flesh and wires but in the more profound sense of being human-technological symbionts: thinking and reasoning systems whose minds and selves are spread across biological brain and nonbiological circuitry. (Clark 2003: 3)

Body hybridization is then, meaningful for posthuman thought. Those thinkers who follow this theory use words such as postbiological, postorganic, postevolution or postsubject so as to refer to the new biological configuration coming from the constant transformation and the 'upgrading' (Sibilia 2006: 11) of body structure. Consequently, posthumanism is interested in technological mechanisms which make it possible to transcend biological nature. Here, biotechnology becomes a perfect tool to manipulate the genetic code of an organism or to reprogram any species genome: consequently, Sibilia thinks we are living an era characterized by posthuman evolution which concentrates on the transformation of human bodies.

Bionic bodies

'Bionic bodies' are postbiological bodies which combine flesh and metal either to emphisize the human body characteristics, or to replace corporeal biological nature with the purpose of becoming a cyborg. According to Moravec technology within a human body allows the biological structure to be changed - going beyond the flesh and thus making it transcend. Stelarc also suggests that we should replace some body parts by mechanical parts, turning the man into a cyborg and the body into an obsolete object. Stelarc's *Virtual Arm*, *Third Hand* and *Laser Eyes* are a part of an external body called *Amplified Body* which, as well as *Muscle Machina*, *Hexapod* and *Exoskeleton* are used by the artist to show the fragility of a human body and the ability to extend its limits with the help of technology. Bionic bodies can be observed in Stelarc's work and, particularly, in the *Time Capsule* performance by Eduardo Kac where the integration of a technological component within the artist's biological system reconfigures a new kind of hybrid human being which is mixed with the technique.

Semi-living bodies

'Semi-living bodies' are based on tissue engineering, an area of biomedical engineering consisting of research and development of biological substitutes to improve or replace tissue and organs in the human body. Both, the selected cells used for culture and the production of biological substitutes, are considered fragments of bodies which are kept alive (thanks to technology), but not in the original bodies that once hosted them. These fragments (cells, tissues and organs) give rise to a particular kind of being that, due to it's biological characteristics, the artists Oron Catts and Ionat Zurr (2006) name as 'semi-being' or 'semi-living'. Semi-living bodies thus establish a new way of 'organicity' (Sibilia 2006: 71) which allows the body not to die but to live forever if kept under special conditions. This idea expresses the posthuman wish to transcend the human existence, annulling the fact of getting older as well as death. This is shown in *Immortality* by Joaquín Fargas a work based on the human ambition to project himself into the future to such an extend that he can overcome his own finite nature. Another work - *No Ark* by Catts and Zurr (TC&A) proposes thinking about the problem of the new semi-living beings, which, because of their hybrid condition, do not correspond to the classification system of the traditional biological sciences.

Modified bodies

Finally, 'modified bodies' are either the result of the recombination of existing living organisms or the result of the obtention of new chimeras when creating genetic sequences that accelerate the pace of biological evolution, and turning them into post-evolutive bodies. Nowadays, the natural selection that eliminates species continuously is no longer a natural selection but is provoked by the technological and industrial growth (Sibilia 2006). Here we have a paradox: due to technology a great deal of biological species become extinct; also technology itself gives rise to the creation of brand new species. Clear examples of this are Eduardo Kac's and Joe Davis' transgenic productions.

Bionic bodies, semi-living bodies and modified bodies are all hybrid bodies that promote the idea of fusion and harmony between different worlds. However, not only does hybridization refer to fusion and conciliation but also to the intersection of diverse worlds that generate contacting areas where the current conflicts and problems are situated (Canclini 2007). To give an example we can analyse the production of transgenic food. This provokes a clash between art and science by giving, at the same time, different points of view of a given hybrid.

In 2002 Critical Art Ensemble (CAE) carried out the project *Contestational Biology* which showed a large number of transgenic crops like corn, canola and soy resistant to Roundup. This is a herbicide which kills everything, even the crops, and whose principal component is glyphosate. The aim of this project was to reverse genetic modification by using non-toxic chemical disrupters that could detect plants with genes resistant to herbicides. When dying the plants with this product, those cells with the Roundup Ready active enzyme gave the transgenic vegetables a non-natural colour, thereby preventing their commercialization in the markets.

However, for many scientists, the use of transgenic plants tolerant to herbicides, especially to glyphosate, is better than the use of unmodified plants, which may have been treated with more toxic contaminant herbicides than glyphosate. Transgenic crops allow farmers and producers to reduce the dose and the kind of herbicide to be used, which means saving money as well as a less harmful environmental impact (Hopp 2007).

Not only does CAE support free agrochemical organic production, but also the right to know the scientific processes by which food is genetically modified. The principal aim of project *Free Range Grain* was to criticise the lack of scientific and political ethics within genetic engineering (particularly when talking about food production). This work was a live performative action where artists and the public worked together in a biotechnological laboratory. Their goal was to make people aware that science is not a field that the lay person cannot understand and they explained the technoscientific processes and allowed people direct experience by using transgenic organisms.

Examples such as these are hybrid practices combining art, science and technology. These include transgenic art, bioart, biological art, tactical media or any other artistic practice which includes biotechnology. These practices set forth an antagonist position towards the use of technoscience, which means the idea of hybridization as a *reconciliation* is not always considered.

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